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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,062	06/01/2005	Jean-Jacques Donze	TW/4-22810/A/PCT	8831

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CIBA SPECIALTY CHEMICALS CORPORATION
PATENT DEPARTMENT
540 WHITE PLAINS RD
P O BOX 2005
TARRYTOWN, NY 10591-9005

EXAMINER

HEVEY, JOHN A

ART UNIT	PAPER NUMBER
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1709

MAIL DATE	DELIVERY MODE
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09/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/537,062

Applicant(s)

DONZE ET AL.

Examiner

John A. Hevey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 12-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>02 September 2005</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Status of Application

1. Claims 1-9 and 12-16 are pending and presented for examination.
2. Claims 10 and 11 are cancelled.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. EP03/50913, filed on 12/01/2003.

Information Disclosure Statement(IDS)

The information disclosure statement (IDS) is submitted on 09/02/2005. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner. Please refer to applicants' copy of the 1449 submitted herewith.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1-9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fringeli et al (US5053055).
- a. In the instant case, a mixture of whitening agents comprising 11-20% a di-styrylbenzene (Formula 1), and 80-89% a bis-benzoxazole (Formula 2) which includes X, a bivalent radical of formula 3, 4, or 5; and further including R1 selected from hydrogen, C1-C6alkyl, C5-C14aryl, and C6-C24aralkyl. Wherein, claim 2 of the instant case further defines the mixture of comprising 13-17% of compound of formula 1, and 83-87% of the compound of formula 2.
 - b. Fringeli teaches a compound or mixture of fluorescent whitening agents selected from a group containing di-styrylbenzenes, bis-benzoxazoles, bis-benzoxazoles-thiophenes, bis-benzoxazoles-naphalenes, stilbenes, etc. It

further teaches mixtures comprising 60-85% of a bis-benzoxazoles (mixture IV and VI column 9) and mixtures comprising 13-80% specific di-styrylbenzene compounds (mixtures I-III, and V, columns 8 and 9).

c. The prior art fails to teach a specific example of a mixture having both fluorescent whitening agents (Formula 1 and 2) as required by the instant claims. However, it would have been obvious to one of ordinary skill in the art to substitute the use of alternative whitening agents to arrive at the same fluorescent whitening material as required by instant claims because Fringeli suggested the use of 60-85% of a compound of Formula 2 (e.g. mixtures IV and VI, column 9) and 15-40% of an additional brightener with a compound of Formula 1, as essential components to make various fluorescent whitening products. The motivation for such a modification would be to improve fluorescent whitening capability or to alter the color of fluorescent light. As evidenced by Fringeli's teaching, the techniques and skills required to make such modification are well within the level of ordinary skill in the art, and therefore the claimed subject matter is not patentably distinct over the prior art of the record.

d. In regards to claim 3, Formula 1a of the instant application is taught by the prior art in mixtures I, II, and III (column 7).

e. In regards to claims 4-6, Formula 2a of the instant application wherein R1 denotes hydrogen or C1-C6alkyl, and X is a bivalent radical of Formula 3, is taught by the prior art in claim 7 (column 14).

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- f. In regards to claim 7, Formula 2a of the instant application wherein R1 denotes hydrogen and X is a bivalent radical of Formula 4, is taught by the prior art's formula 14 (column 5).
- g. In regards to claims 8-9 and 12 where the claims further require a composition comprising water, 3-25% by weight of whitening agents and 0 to 60% of auxiliaries, and preferably, 10-20% by weight of whitening agents and 5-50% of auxiliaries, Fringeli et al teaches a stable dispersion comprising 4-20% of fluorescent whitening agent, 2-20% dispersant, 1-15% of copolymer of 2-vinyl-pyrrolidone and 3-vinylpropionic acid, and .1-25% of further assistants (column 13, lines 20-31) and further a stable dispersion comprising 8-15% of fluorescent whitening agent, 2-10% dispersant, 2-10% of copolymer of 2-vinyl-pyrrolidone and 3-vinylpropionic acid, and 0.1-25% of further assistants (column 13, lines 32-36). A suitable dispersant of water is described in the prior art (column 1, lines 23-24).
- h. In regards to claims 13-16, the prior art teaches a method for whitening polyester and polyester/cellulose blends comprising the step of applying a stable dispersion to the polyester or polyester/cellulose blend, wherein said dispersion comprises at least one water-insoluble or sparingly soluble fluorescent whitening agent, at least one anionic, cationic, or non-ionic dispersant, a copolymer of 2-vinyl-pyrrolidone and 3-vinylpropionic acid, and further optional assistants (column 18, lines 14-22). Although, the prior art does not teach the application of this method to 'synthetic fibers', however, it would have been obvious to one of

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ordinary skill in the art to apply a method for whitening polyester to the instant claimed 'synthetic fibers' as polyester is a common type of such fibers.

In regards to claims 13 and 14, it would have been obvious to one of ordinary skill in the art to use a mixture according to the instant claim 1 in an aqueous medium. The mixture was taught by the prior art (see above) and would serve as said water-insoluble or sparingly soluble fluorescent whitening agent.

In regards to claims 14, it would have been obvious to one of ordinary skill in the art to use a composition according to the instant claim 8 in an aqueous medium. The composition was taught by the prior art (see above) and would serve as said stable dispersion of water-insoluble or sparingly soluble fluorescent whitening agent comprising optional additives.

In regards to claim 15, it would have been obvious to one of ordinary skill in the art to use a mixture according to the instant claim 3 in an aqueous medium. The mixture was taught by the prior art (see above) and would serve as said water-insoluble or sparingly soluble fluorescent whitening agent.

Conclusion

1. Claims 1-9 and 12-16 are rejected.
2. No claims are allowed.
3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Anceschi (US5051111) drawn to a mixture of fluorescent

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whitening agents, Martini (US6120704) drawn to a mixture of optical brighteners, and Reinehr (US6719922) drawn to a mixture of fluorescent whitening agents.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Hevey whose telephone number is 571-270-3594. The examiner can normally be reached on Monday - Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on 571-270-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jah

VICKIE Y. KIM
SUPERVISORY PATENT EXAMINER

